



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

5 IN RE APPLICATION OF LANDES ET AL.
SERIAL NO. 09/977,146
FILED: OCTOBER 15, 2001
PRIORITY: SEPTEMBER 20, 1995
FOR: HERBICIDAL MIXTURES HAVING A SYNERGISTIC EFFECT

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DECLARATION

15 I, Cyril Zagar, a doctor of natural sciences, a citizen of the Federal Republic of Germany and residing at Untere Clignetstrasse 8, 68167 Mannheim, Germany, declare as follows:

20 I am a fully trained chemist, having studied chemistry at the University of Aachen, Germany, from 1984 to 1989;

25 I was awarded my doctor's degree by the latter university in 1993;

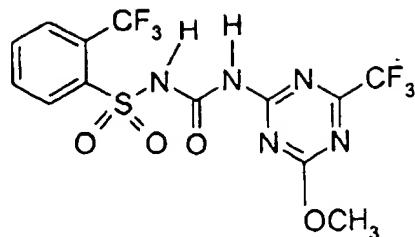
I was a post-doctoral fellow at Stanford University, California from 1993 to 1994;

30 Since 1994, when I joined BASF Aktiengesellschaft of 67056 Ludwigshafen, Germany, I have been engaged in the synthesis of herbicides and herbicide screening;

I am familiar with the invention disclosed and claimed in Application No. 09/977,146 and the field to which said application relates.

35 I have studied the Office Action that has issued in this case and read the references therein, particularly Hacker al. (US-A-5,599,769) and Beestman et al. (US-A-5,569,639) applied by the Examiner.

35 In order to prove the synergistic effect of the inventive herbicidal mixtures the following tests with the sulfonylurea compound represented by the formula



(Example No. 47 set forth in the Table of the application) as a representative for the first active component, and with Glyphosate isopropylammonium salt as a representative for the second active ingredient, were conceived. The experiments were carried out as described in Application Ser. No. 09/977,146.

Each test encompassed the treatment of a first plot of the respective weed with the sulfonylurea representative, treatment of the second plot of the respective weed with Glyphosate isopropylammonium salt (see above), and the treatment of the third plot of the respective weed with the composition according to the present invention of the sulfonylurea representative and Glyphosate isopropylammonium salt (see above). The test plants utilized in the evaluation of the herbicidal efficacy are specified below.

The active ingredients and their composition were – in all instances – applied post-emergence. The phytotoxicity (in percent) which was observed as a result of the treatment with the active ingredients alone and as a result of the treatment with the composition of the active ingredients according to the present invention is compiled in the following table. Furthermore in this table the expected activity of the composition in accordance with the calculation of S. R. Colby based on the "solo" action of the active ingredients is indicated (see the application).

Synergistic herbicidal activity of the mixture of compound 47 (Table) and Glyphosate isopropylammonium salt, post-emergence, greenhouse

Amount of active ingredient in g/ha		Herbicidal effect versus Alopecurus myosuroides (ALOMY)		Herbicidal effect versus Echinochloa crus-galli (ECHCG)	
Comp. 47	Glyphosate isopropylammonium salt (from group b3)	Found	Calculated by Colby's formula	Found	Calculated by Colby's formula
0,98	-	0	-	0	-
-	31,25	10	-	30	-
0,98	31,25	20	10	40	30
1,95	-	0	-	0	-
-	62,5	10	-	50	-
1,95	62,5	20	10	60	50

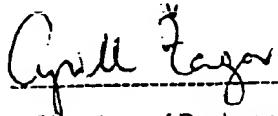
It is immediately apparent from the data compiled in the foregoing table that the combination of the sulfonylurea with Glyphosate isopropylammonium salt (see above) results in an effect exceeding the expected value, i. e. that the combination results in a beneficial synergistic action.

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I further declare that all statements made herein of my own knowledge are true and that all statements made on information or belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 101 of 10 Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed at 67065 Ludwigshafen, this 7th day of November 2003

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Signature of Declarant